

Frequently Asked Questions

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This page is courtesy of your Narrowband Helpdesk representatives. This is a small compilation of your most commonly asked questions concerning the narrowband migration process. Please check back occasionally as we periodically update this list.

E-mail your questions to: afcesa.narrowband@tyndall.af.mil

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What does the term “narrowband” mean?

Narrowband refers to the narrowing of the channel spacing being each designated frequency assignment. Previously, the spacing between each frequency assignment was 25 kilo hertz (kHz). The new “narrowband” channel spacing reduces the spacing requirements to 12.5 kHz between each allotted frequency assignable and decreases the channel bandwidth to ≤ 11 kHz.

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Why is narrowband migration necessary?

The frequency spectrum is considered to be a natural resource much like coal and oil. All natural resources are limited in nature and so are the numbers of frequencies that can effectively and efficiently transmit data and voice information. The rapid rise in wireless devices has created a large demand for the limited number of frequencies available under the current system utilizing 25 kHz channel spacing between frequency assignments. Reducing the channel spacing down to 12.5 kHz and the maximum occupied bandwidth of the signal to ≤ 11 kHz effectively doubles the number of frequency channels available for new and existing users.

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What does the acronym “NTIA” stand for?

NTIA is the acronym for the National Telecommunications and Information Administration (NTIA). The NTIA administers Federal use of frequency spectrum just as the Federal Communications Commission (FCC) administers non-federal use of the

frequency spectrum. The NTIA is an agency within the U.S. Department of Commerce. You can visit their website here: <http://www.ntia.doc.gov/>

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What are the “mandatory” deadlines for narrowband conversion?

The NTIA deadlines for converting to a narrowband operation are:

- 162 – 174 MHz VHF Band
 - Existing systems must be converted by **1 January 2005**
 - New systems must use the new 12.5 kHz channel spacing by 1 January 1995
- 138 – 150.8 MHz VHF Band
 - Existing systems must be converted by **1 January 2008**
 - New systems must use the new 12.5 kHz channel spacing by 1 January 1998
- 406.1 – 420 MHz UHF Band
 - Existing systems must be converted by **1 January 2008**
 - New systems must use the new 12.5 kHz channel spacing by 1 January 1995

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Are Scope Shield II radios required to meet the NTIA deadlines?

NO! Scope Shield II radios are considered to be for Tactical/Training use and NITA narrowband requirements do not apply. You can find reference to this exemption in the

NTIA Manual of Regulations & Procedures for Federal Radio Frequency Management (May 2003 Edition), which is also known as “The NTIA Redbook”. The

following link will take you to the index of chapters of the NTIA Redbook:

<http://www.ntia.doc.gov/osmhome/redbook/redbook.html>. Chapter 5 at

<http://www.ntia.doc.gov/osmhome/redbook/5.pdf>, page 5-16 paragraph 5.3.5., where reference is made to “Military equipment used for tactical and/or training operations”

being exempt, notes these standards do not apply to.” and then lists categories of equipment that it does not apply to.

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Should our Fire Alarms be considered for narrowband conversion?

Yes! Any fire alarm reporting system that uses radio transceivers/transmitters should be inventoried and assessed for narrowband compliance. See the AFCESA Narrowband Help Desk web page for details on inventory guidance and inventory forms that can be used to accomplish a thorough inventory of CE radio equipment to include fire alarms. AFCESA Narrowband Help Desk web page is at URL:

<https://wwwmil.afcesa.af.mil/Directorate/CES/Mechanical/NarrowBand/default.htm>

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Will narrowband upgrades have an impact on ACES-FD?

No! Narrowband upgrades to individual transceivers at each building will have no effect on ACES-FD. Transceivers only process a signal to and from the fire dept. base station. Whatever the manufacturer develops to interface from the base station computer to ACES-FD will be software and hardware solutions that connect the two management systems after the signals are processed into the base station software residing on the base station computer. The transceiver located at the fire department base station will still be inputting its signals into the PC & software that the department is using for the fire alarm monitoring and management system. From there, some type of hardware interface connection will have to be used to get the data on to ACES-FD which does not care how the signal or information got to the system that is feeding or updating ACES-FD.

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What about radio systems used by EOD, Prime Beef, and Red Horse Squadrons?

Radio frequency devices like the MX-22/122, the HEREO Monitor, RONS and Scope Shield II radios (AN/PRC-139) are considered Tactical/Training systems (if coded as a deployable asset per AF Audit Agency) and are exempt from the NTIA narrowband mandate within the United States and its possessions. You can find reference to this exemption in the ***NTIA Manual of Regulations & Procedures for Federal Radio Frequency Management (May 2003 Edition)***, which is also known as “The NTIA Redbook”. The following link will take you to Chapter 5 where the reference is made to “Military equipment used for tactical and/or training operations”:

<http://www.ntia.doc.gov/osmhome/redbook/5.pdf>

See page 5-16, paragraph 5.3.5.

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What is the definition of a Tactical/Training system?

According to the NTIA Redbook, “Tactical” basically means deployable assets designed specifically for combat conditions and “Training” means the simulation of wartime operations through military exercises and maneuvers to assure immediate operational readiness. Explanation of the term “Tactical and Training” can be found in the NTIA Redbook, Chapter 8, page 8-8, paragraph 8.2.12. The following link will take you to this Chapter: <http://www.ntia.doc.gov/osmhome/redbook/8.pdf>

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**What about our Land Mobile Radios, do they need to be narrowband compliant?
Wouldn't our base Communications Squadron handle this?**

Yes! Land Mobile Radios (LMRs), including fixed base stations and repeaters, used daily for sustaining base operations, are NOT considered tactical/training equipment and need to be narrowband compliant.

No & Yes! Even though the Base Comm Squadron authorizes use of and maintains Civil Engineering Squadron bricks (handheld radios), base stations, and mobiles, they are only directly responsible for the trunking system infrastructure that supports the NET(s). However, HQ AF Communications Agency (AFCA) has planned and budgeted for narrowband upgrades to their infrastructures and mission critical LMRs. What this means to the CE is that Fire/Crash/EOD radios used daily for sustaining base operations will be taken care of by Base Comm. The remaining CE fixed and mobile radios are considered mission essential by the AFCA and will be taken care of, if and only if, funds are available. MAJCOM/Base policy may vary regarding LMR migration responsibilities and it is recommended that you contact your Comm Squadron LMR Manager for their migration plan. It is also recommended that you plan and program funds for all mission essential radios that may not be handled by the Comm community. The LMR Manager knows exactly which CE radios are narrowband compliant and you may be surprised at the number of radios that are narrowband capable but are operating in the wideband mode because of a wideband trunking system.

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Can existing systems that have a valid frequency license be “grand fathered” or given a waiver?

No! There are no provisions for waivers, deviations, or delayed implementation. Bottom line . . . if you do not convert your system to narrowband technology by the mandatory deadlines and you interfere with adjacent 12.5 kHz channel users, you will

be forced to cease and desist operations and possibly face fines/penalties from the NTIA and FCC.

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Why is there an AFCESA Narrowband Compliance Help Desk?

The AFCESA Narrowband Compliance Help Desk was established on 1 Oct 01 to assist MAJCOMs with and provide Air Force wide oversight for converting CE-owned/maintained radio-based equipment/systems to narrowband technology. The Help Desk is providing technical/programmatic assistance to MAJCOMs and Base Civil Engineers in order to meet the NTIA mandate.

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What can the Help Desk do for my Squadron and me?

The AFCESA Narrowband Compliance Help Desk has implemented two automated tools for MAJCOM and Base CE use: an on-line registration page for Narrowband point-of-contacts and an on-line database for capturing all wireless radio-based equipment owned, operated, and/or maintained by Air Force Civil Engineers. In addition to these useful tools, numerous hyperlinks to reference material are available for viewing and downloading. The help desk is available from 0800—1600 hours CST and will be the focal point for most radio-based systems and solutions. Help Desk personnel will contact the major manufacturers of CE equipment for narrowband compliance information, replacement parts, upgrade kits, approximate costs, etc. and disseminate the information to the MAJCOMs and installations.

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When I hear the terms “radio” and “LMR” I think of my handheld brick and my mobile in my truck. What other kind of radios are being used by CE Squadrons?

Nearly all active duty, Air National Guard, and Air Force Reserve wireless radio-based systems used for sustaining base operations on a daily basis are impacted by the NTIA narrowband mandate. Some of these wireless radio systems may include, but are not limited to:

- Fire reporting and/or building security alarm systems
- Load management switches for HVAC and other EMCS/SCADA systems
- Industrial control switches/monitoring devices used on well pumps, lift stations, refrigerators, etc.
- Wildlife/Natural Resource systems such as remote control deer
- Aircraft arresting systems/remote barrier controls
- Bird scare systems that are operated by Base Ops or Air Traffic Control Personnel
- Disaster Preparedness radio-based systems such as Giant Voice, sirens, and Hazmat suits
- Surveying equipment that uses radio modem to transmits GPS data

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Who is paying for these upgrades/replacements and what is the next step after we inventory our wireless radios?

The ultimate responsibilities for ensuring funds are available to complete the NTIA mandated conversion to narrowband technology remains with the MAJCOMs. Those who have identified valid narrowband requirements will be prime candidates for year-end monies. Identifying narrowband upgrade/replacement requirements start at the base CE level and work their way up to Air Staff via the normal funding/budgeting process. Impact if not funded: Possible interference between non-compliant and compliant systems. If interference occurs, the non-compliant radio system will be forced to shut down. It is highly recommended that BCEs plan for these upgrades and/or replacements in a fiscally responsible manner in order to prevent large funding spikes, added stress and pressure on the procurement and installation crews, and long lead times from system manufactures.

The next step after identifying non-compliant wireless radio systems is to determine the technical fix and associated cost. The AFCESA Narrowband Compliance Help Desk will be the central focal point between BCEs and equipment manufactures. We will help you identify replacement systems, upgrade kits, equipment and installation costs and the contract vehicles available to procure and install system components. Note: Before system procurement (i.e., obligation of funds), contact your Installation Spectrum Manager (ISM). They will assist you in frequency validation of narrowband compliance, frequency license submittals, updates, and approvals. **Note: Contacting your ISM before system procurement is imperative and REQUIRED.**

Bottom line: Time is running out and it's the BCE's responsibility to ensure systems are narrowband compliant by the NTIA deadlines above. There is no "central funding" and procurement office to handle all Air Force active duty, guard, and reserve systems. However, if you submit your requirements in a timely fashion through normal funding channels, out-of-pocket expenses can be mitigated or eliminated.

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What do I do with the old wide band radios that I am replacing or the parts that I remove if upgrading the existing radio?

First you need to contact your Base "Installation Spectrum Manager" (ISM) at the SC Squadron for guidance and direction on demilitarizing the old wideband radio prior to turning it in at DRMO. These radios need to have the transmit capability disabled to prevent it from being reused after being disposed of through the DRMO process. Some radios can be disabled through software programming and some types may have to be physically damaged (crushed or broken with a hammer) to prevent further operation. At this time there are no plans for any type of central receiving center for the old wideband radios or removed upgrade parts. You should follow standard DRMO procedures for the radio and/or parts just as you would with any other type of government owned parts or equipment.

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